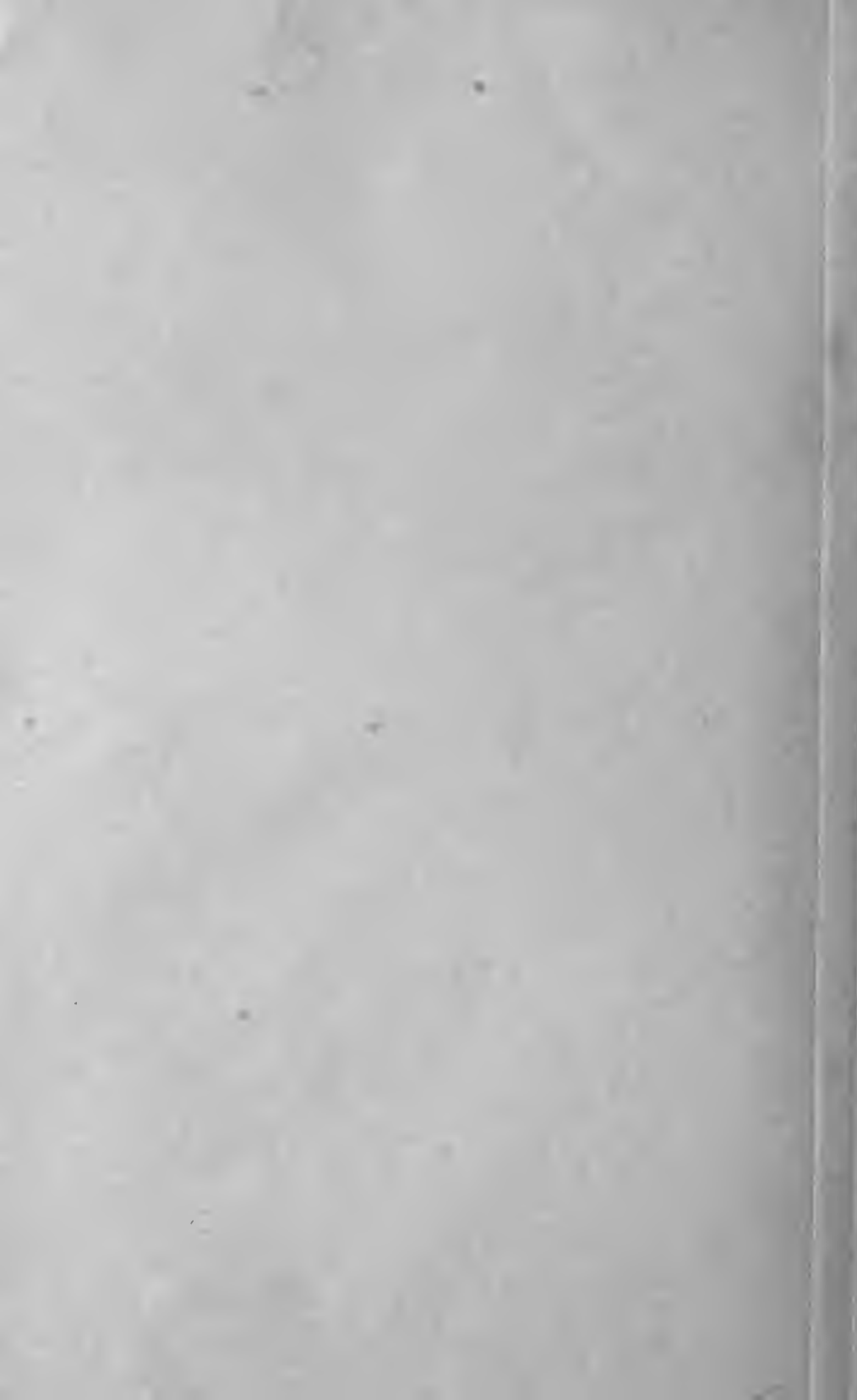


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A COUNTRY HOME IN LOUISIANA

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HOME ECONOMICS  
*Public Schools of Louisiana*

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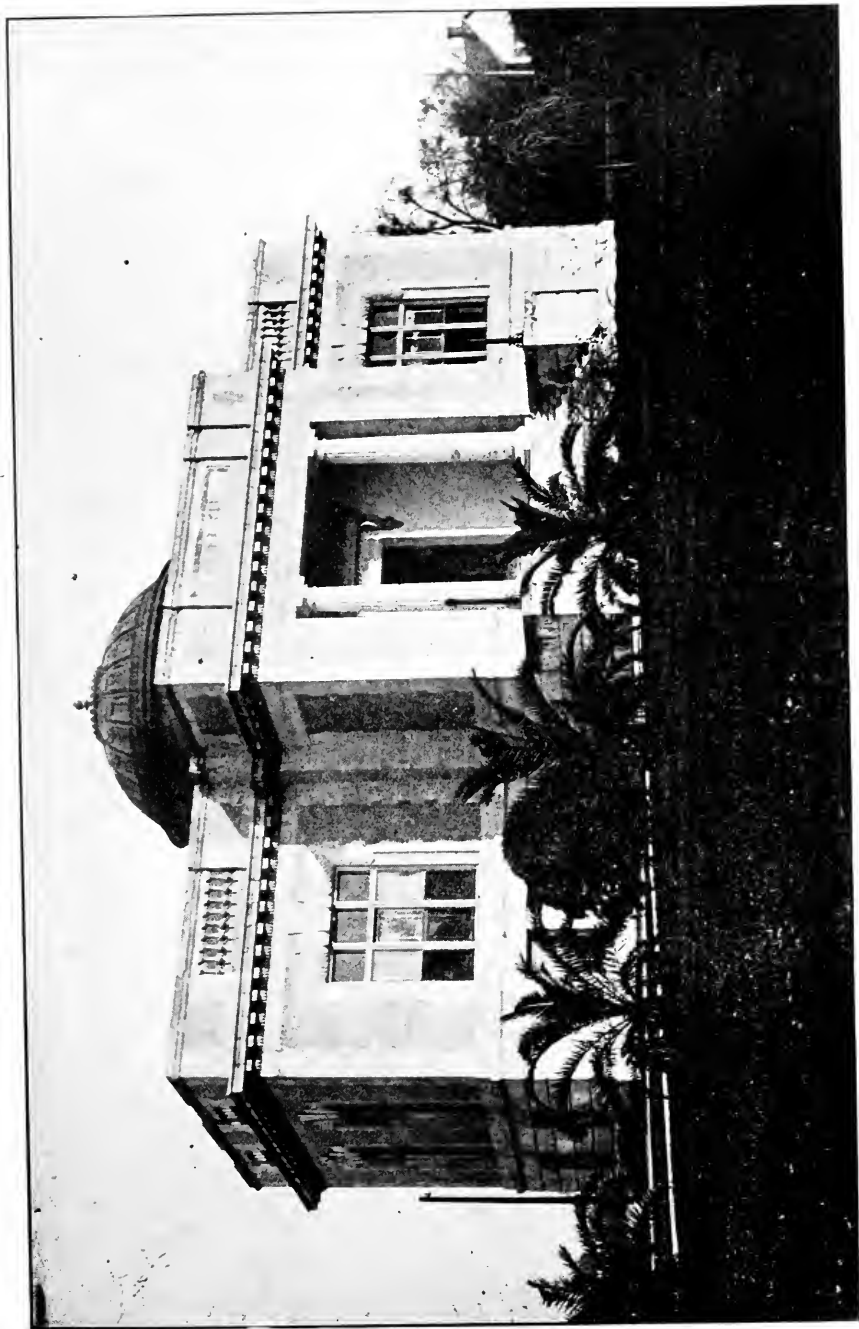
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## HOME ECONOMICS IN THE PUBLIC SCHOOLS.

Courses in home economics as found in the curricula of the schools of today are not resultants of accident but of an evolution, the purpose of which is to bring the public schools into closer and more vital touch with the conditions of our present-day civilization, and to meet more fully the demands of this civilization.

To fit for life, to make the individual intellectually, socially, morally, and industrially efficient is the all-important function of the education of today. "The school must produce not merely a good man or woman, but a good man or woman good for something." Formerly a girl was taught in the home to cook, spin, weave, sew, and make garments, but modern life with its many complexities has made this impossible, so the school must provide this training.

### PRACTICAL VALUE OF HOME ECONOMICS.

1. The subject of domestic science includes those things with which a woman must necessarily deal every day of her life.
2. The child through proper instruction and illustration of right ideals adopts a proper standard of home life.
3. Habits of accuracy, observation, reflection, application of sciences to real life, careful movement, order, neatness, and cleanliness are the results of daily practice.
4. A young girl's interest in home duties is retained and intensified by finding out the *reason* for doing this and that.
5. With a knowledge of the principles of ventilation, heating, lighting, plumbing, cleaning, and disinfecting; of the food requirements of different people and how to supply them, the woman in the home is enabled to keep her family well nourished and comparatively free from disease.
6. A knowledge of the composition and digestion of food makes it possible to prevent digestive disorders.
7. With a knowledge of the nature of food materials a substitution of one thing for another may be made, so as wisely to meet an emergency or save money.
8. Ability to plan profitably the division of income and keep accounts that are of value for reference may save the family from "living beyond their means," with consequent unhappiness.
9. Ability to draft patterns, make and mend articles of clothing, may add more to one's happiness and prosperity than any other school study.

10. Mistress and maid who have solved the same problems in home economics are mutually helpful.
11. Home economics really means "right living."
12. A girl has a right to an education as precisely adapted to a woman's work as is a boy's preparatory to a man's work.

## **STATE AID FOR DEPARTMENTS OF HOME ECONOMICS**

The State Board of Education has appropriated \$400 for each approved department of home economics. This sum is to be paid in nine equal monthly installments. Not less than \$100 of this appropriation shall be set aside to be expended under the teacher's direction in the purchase of necessary supplies.

### **RULES GOVERNING APPROVED DEPARTMENTS OF HOME ECONOMICS**

1. There shall be at least two rooms of suitable size, properly screened, devoted exclusively to the teaching of domestic science and art.

2. The qualifications of the teacher shall be the equivalent of a full course in home economics in an institution offering specific training to teach the subjects in this course.

3. The state course of study for departments of home economics in high schools shall be followed.

4. The furnishings shall include tables, cases, cupboards, chairs, desks, at least two sewing machines, large stove or range, and the equipment shall include such implements and utensils regarded as essential for the proper presentation of the course.

5. There shall be a minimum of twelve girls above the seventh grade to take the work in home economics.

6. On completing the course in home economics in the high school each student is entitled to 1 unit in household management, 1.5 units in cooking, and 1.5 units in sewing, making, in all, four credits.

7. Each school having a department of home economics recognized by the State Board of Education is required to have a home economics library. There must be expended annually \$15.00 in the purchase of books.

8. Schools preparing to meet the requirements and desiring state aid shall make application by August 1 of each year. Applications should be signed by the parish superintendent and the president of the parish school board.

## DEPARTMENTS OF HOME ECONOMICS IN FOUR-ROOM SCHOOLS OF THE STATE

1. There shall be at least one room of suitable size, properly screened, and devoted exclusively to the teaching of home economics.

2. There shall be a minimum of seven girls of sufficient age and advancement to take work in this subject.

3. These departments shall be established only in schools employing at least four teachers.

### QUALIFICATIONS OF THE TEACHER.

#### I. Technical and Educational.

1. The qualifications of the teacher shall be the equivalent of a full course in home economics in an institution offering specific training to teach the subjects of the course.
2. Broad knowledge of all branches.
3. Good taste in art, color combination, and design.
4. Knowledge in economy in buying.

#### II. Business Knowledge for General Management.

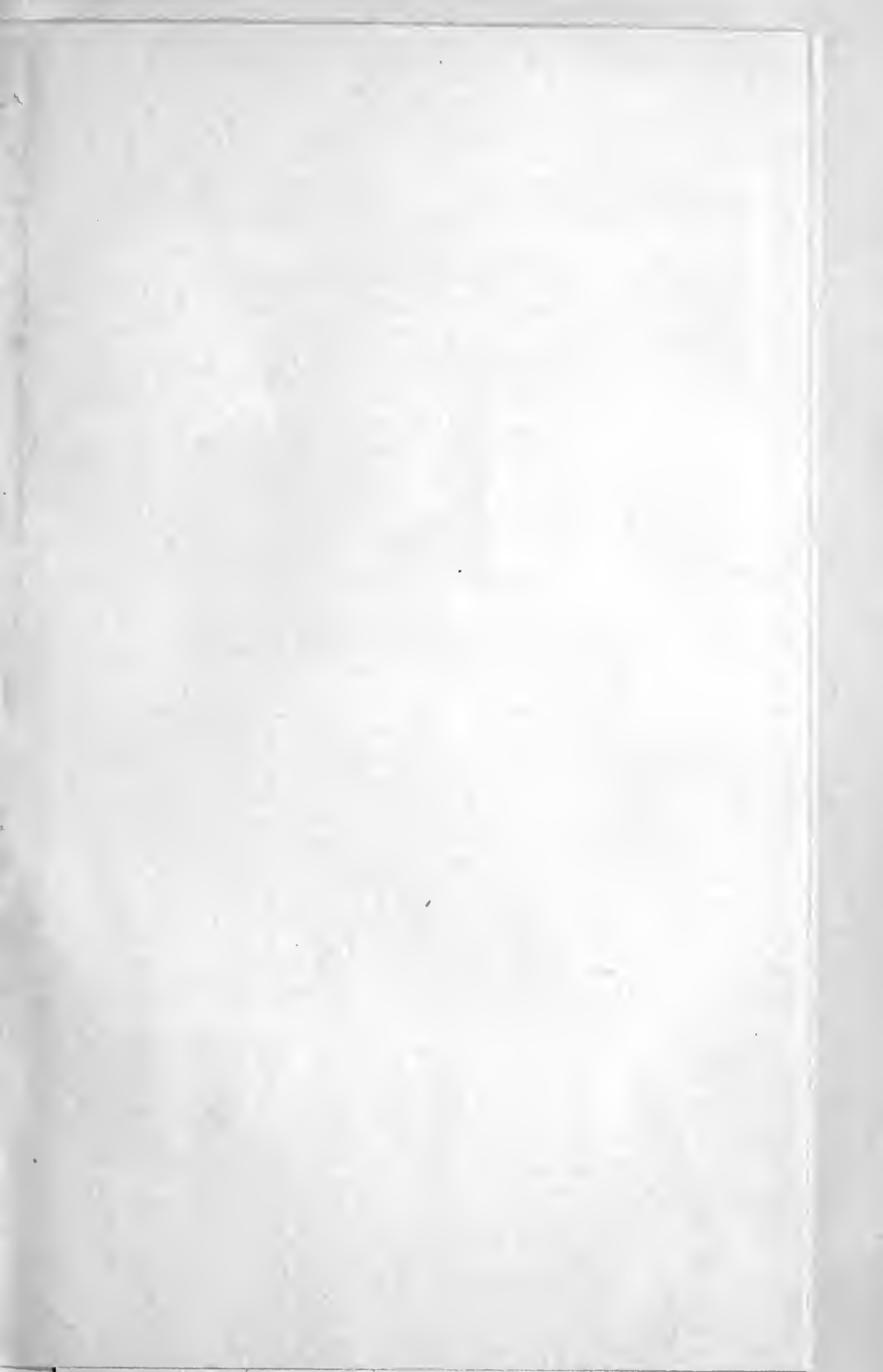
1. Checks, bills, receipts, itemized accounts.
2. Supply orders to submit to Board of Education.
  - (a) Amounts closely estimated.
  - (b) Cost closely estimated.
3. Equipment.
  - (a) Kind, depending on the means of the school and the age of the student.
  - (b) Where obtained, cost, qualities, etc.
4. Written forms for:
  - (a) Outlines or syllabus of work.
  - (b) Course of study.
  - (c) Yearly report or short article for catalog.
5. Letters to superintendents and school boards.
6. Approach business men and parents tactfully.
7. Conduct teachers' meetings.
8. Public speaking.
9. Organization of classes.
10. Inventory of supplies.

### III. Social Knowledge.

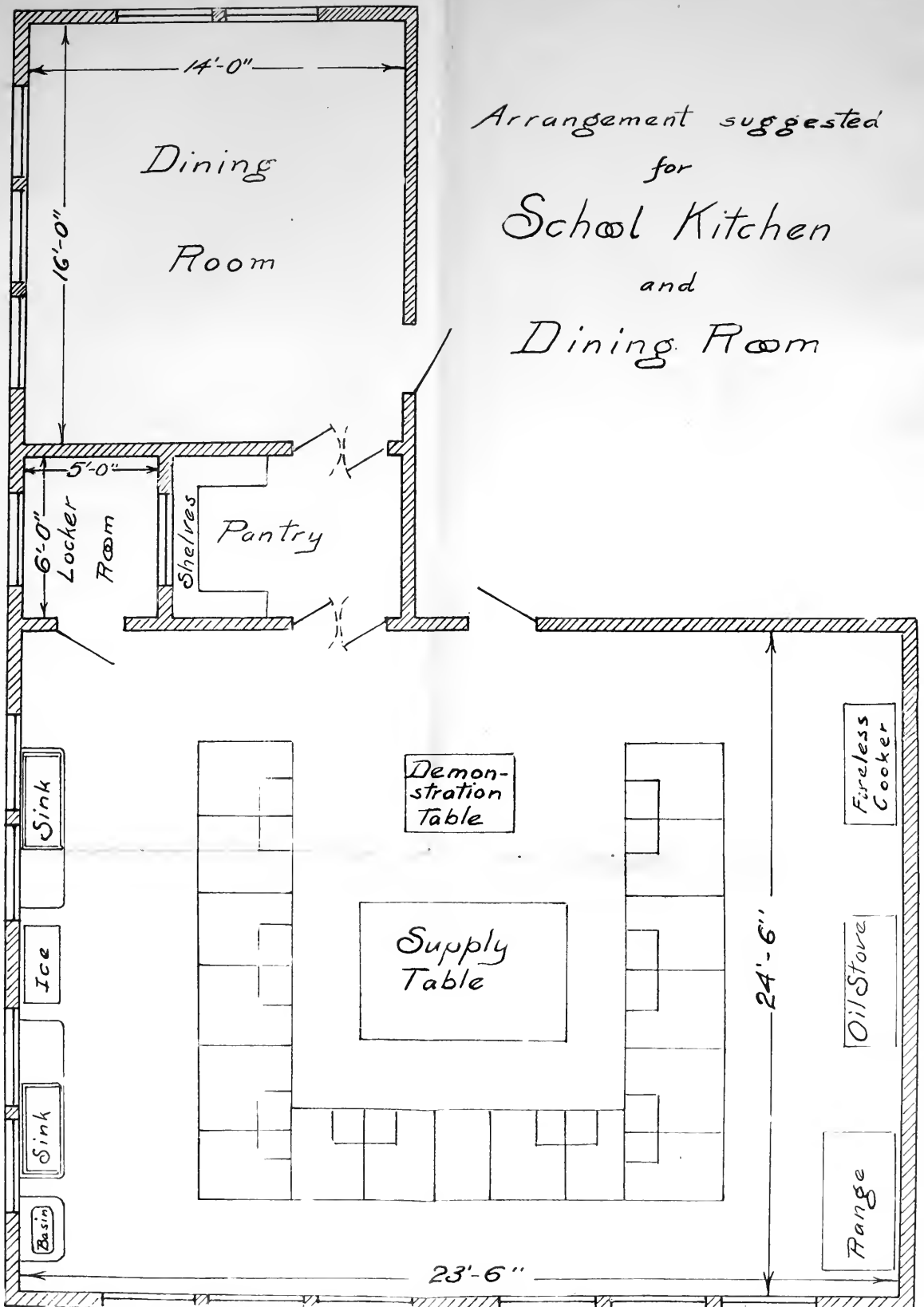
1. Knowledge of environment and home education.
  - (a) How influence through the children?
    - (1) Cleanliness, air, clothing, manners.
2. Home needs studied. Connection made between the home and school. Make articles which would be of use and interest in the home.
3. Civic needs. How best help the children to be useful in supporting them.
4. Mingle with the people in the community and take part in the social life.
5. Carefully adapt your work to the life and interest in the community.

### DUTIES OF TEACHERS.

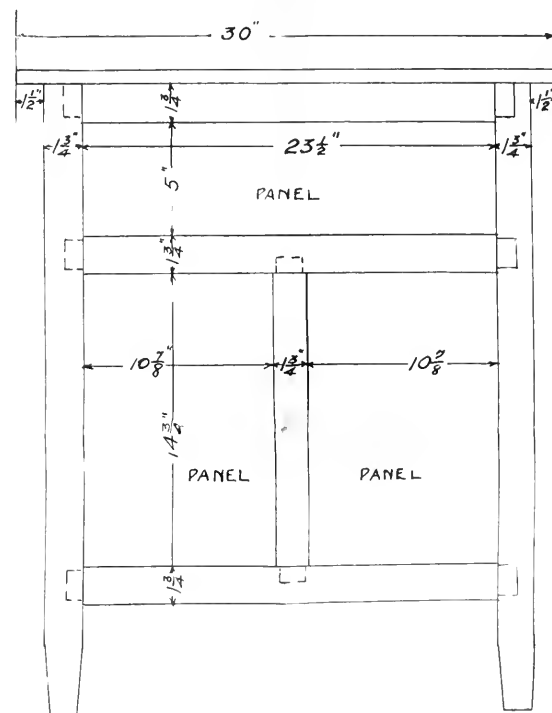
1. The teacher of home economics must give at least two-thirds of her time to this subject, but may be employed to teach other subjects during the time remaining.
2. The teacher of home economics in a school receiving state aid for this purpose or some other competent teacher shall have charge of the extension work in home economics and the girls' club work in the school community. She will be expected to participate in the parish institutes and work in conjunction with the Department of Agricultural Extension in carrying out that work.
3. The Agricultural Extension Department of the Louisiana State University has been designated to supervise the home economics departments in the schools receiving state aid for this purpose. It should be the duties of the teachers of home economics to report monthly to the parish superintendent and to the head of the Agricultural Extension Department of the Louisiana State University, Baton Rouge, La., the progress of the work, using such blank forms as may be supplied by the above-mentioned departments.
4. Miss R. Myrtelle Billings, representing the Extension Department of the Louisiana State University, has been selected to inspect state departments of home economics in the high schools. The Extension Department will be glad to



Arrangement suggested  
for  
School Kitchen  
and  
Dining Room



BATON ROUGE, LA. JULY 5, 1913





co-operate with the local authorities in such matters as selecting teachers for the departments of home economics, installing the necessary equipment, and in any matter in which it can be of service.

## Course of Study for Approved Departments of Home Economics.

### A. EIGHTH GRADE.

1. Sewing. (First half of school year.)
2. Cooking. (Second half of school year.)

### B. NINTH GRADE.

1. Sewing. (First half of school year.)
2. Cooking. (Second half of school year.)

### C. TENTH GRADE.

Household Management. (Throughout the year.)

1. The house.
2. Sanitation.
3. Water supply.
4. Laundering.
5. Personal and household accounts.
6. Home nursing and invalid cookery.

### D. ELEVENTH GRADE.

1. Cooking. (First half of school year.)
2. Sewing. (Second half of school year.)

### A. EIGHTH GRADE—SEWING.

(First half of school year. One double period daily.)

#### FIRST MONTH.

- I. Stitches to be learned. Basting, running, over-handing, chain, and hem stitch.
- II. Articles to be made.
  1. A sewing bag: Teaching running stitch, stitching stitch; hemming, overcasting, overhanding, and putting in cord.
  2. A dish towel: Teaching hemming (using a gauge in making a hem).
  3. A table napkin: Teaching French hemming.

### III. Study of the sewing machine.

1. Invention.
2. Kinds commonly used.
3. Names of parts.
4. Operations concerned in using.
5. General care of machine.
6. Drill in threading, oiling and straight stitching on paper.

#### SECOND MONTH.

### I. Textiles begun. Study of cotton. Growth, early history, varieties, cotton culture, by-products.

### II. Drafting of patterns.

1. Simple cooking apron. (See directions.)
2. Kimona nightgown.

### III. Making of cooking apron by hand.

### IV. Nightgown begun combining machine and hand sewing.

*(Directions for drafting pattern for cooking apron.)*

#### I. Measurements needed.

1. Bust measure.
2. Length from highest point of shoulder to desired length of apron.
3. Waist measure.

#### II. To draft front piece of apron.

1. Measure on folded edge of paper length of apron A B.
2. Measure at right angles to point A. 1-4 the bust measure for point C.
3. Drop perpendicular from E down 1 inch for point D.
4. Measure out from A. 6 inches on line A C for point E. Connect E and D with a straight line.
5. Measure out at right angles to point B the length of A C for point F. Connect D and F with a straight line.
6. Measure down on line A B from A, 6 inches for point G. Connect G and E with a curved line.

Cut out through folds of paper. The front may be cut semi-fitted if desired.

III. To draft back piece of apron.

1. Measure on fold of paper length of back A B.
2. At right angles to A measure out 1-4 bust measure for point C.
3. Drop perpendicular down 1 inch below point C for point D.
4. Measure out from A on A C 6 inches for point E. Connect E and D with a slanting line.
5. Measure out at right angles to B 1-5 waist measure for point X. Connect D and X with a slanting line.
6. Measure down from A 5 inches for point G. Connect E and G with a curved line.

IV. Cut band length of waist measure plus 2 inches. Make four inches wide.

THIRD MONTH.

1. Spinning and weaving. Borrow cards used in hand carding and a spinning wheel if possible. Visit loom if one can be found in the neighborhood.
- II. Study of materials suitable for undergarments.
  1. Collect samples and mount in notebooks, stating width, price, and good and bad qualities of each.
  2. Tests for adulteration.
- III. Finish nightgown. A simple design may be embroidered if there is time. Lead pupils to see why colored ribbons and designs worked in color should be avoided.
- IV. Making of drawers, using commercial patterns. Make special study of the pattern, leading to more independent work on the part of the pupils.

FOURTH MONTH.

- I. Study of cotton continued. Manufacture of cotton cloth, finishing of cotton material, cotton industry in the United States.
- II. Make collection of samples of cotton materials suitable for dresses, window curtains, sheets and pillow slips and mount as above. It is necessary to know these materials by sight and "feeling" if one is to become a wise buyer.

111. Making a plain princess slip or plain underskirt. Attention should be given to different methods of trimming. Discussion of lace as to durability and beauty.

### A. EIGHTH GRADE—COOKING.

(Second half of school year. One double period daily.)

#### FIFTH MONTH.

- I. Care of kitchen, tables, stoves, utensils, sink, refrigerator, cupboards, and food supplies.
  1. Students list utensils and order of keeping, and become acquainted with laboratory.
  2. Laboratory directions as to:
    - (a) Personal cleanliness.
    - (b) Care of table or desk and utensils in same.
    - (c) Care of towels, sink, and stove.
- II. Food.
  1. Definition.
  2. Classification as to:
    - (a) Sources; animal and vegetable.
    - (b) Composition: protein, fat, carbohydrates, etc.
    - (c) Uses in body.
  3. Weighing.
  4. Table of measures and abbreviations. Practice in measuring, using cups, tablespoons, and teaspoons.
  5. Explain the duties of the "housekeeper" in the laboratory. Explain the best methods of keeping note-books and using text-books.
- III. Classification of food reviewed.
  1. Methods of cooking studied: baking, boiling, frying, etc. Baking studied in detail. Irish potatoes baked and stuffed in half shell. Correct method of dishwashing taught.
  2. Boiling: principles involved; temperature, etc. Practice: mashed potatoes; scalloped potatoes.
  3. Frying: principles involved; high temperature. Sauteing: principles involved; high temperature

reached. Fricaseeing: principles involved; high temperature reached. Practice: French fried potatoes; potato balls.

4. Steaming: use of double boiler. Cereals. Practice: oat meal with baked apples.
5. Study of starch (review carbohydrates). Corn meal mush and cream of wheat. Corn starch experiments.  
(Our object in these lessons is to teach the different methods of cooking while teaching carbohydrates. In each lesson teach the composition, food value, cost, source, preparation and serving of food.)
6. Starch continued: long cooking of starch emphasized. Corn starch mold.
7. Vegetable fiber or cellulose. Vegetable lesson: creamed cabbage, creamed turnips, creamed carrots, creamed onions.
8. Sweet potatoes: southern dishes. Candied sweet potatoes. Grated potato pudding.
9. Vegetable lesson. Egg plant: stuffed, fried. Cucumbers: stuffed, salad.
10. Cereals, such as grits, cornmeal, oatmeal, cream of wheat, and prepared cereals.

#### IV. Study of protein foods.

1. Egg lesson. Experiment showing effect of heat on eggs.
  - (a) Low temperature for long time.
  - (b) High temperature for short time.
  - (c) High temperature for longer time.
  - (d) Cooked in shell below boiling point. Made into sandwiches.)
2. Eggs: cooked at low temperature. Poached on toast. Scrambled with toast.
3. Omelets: (a) French, (b) puffy, (c) with rice, (d) with bread crumbs and white sauce.
4. Thickening property of eggs in custard.
  - (a) Soft (boiled custard).
  - (b) Firm (cup custard).

## SIXTH MONTH.

## I. Batters and doughs.

1. Classification. Popovers, griddle cakes, steam as leavening agent.
2. Batters. Plain muffins. Study of baking powder as leavening agent.
3. Baking powder biscuits. Baking powder reviewed.
4. Fruit rolls made of a variation of baking powder biscuit dough and fruit. Sauce.
5. Soda and sour milk as leavening agents. Egg bread and graham muffins.
6. Soda, sour milk and molasses as leavening agents. Boston brown bread. Steamed.
7. Test on leavening agents and batters and dough.
8. Yeast bread. Study of yeast plant. Classification of yeast. Effect of different temperatures. Effect of different cultures. Magic yeast sponge set (or any dry yeast).
9. Magic yeast bread finished. Made into loaves. (Some outside work necessary.)
10. Compressed yeast bread. Home-made yeast cakes. Cinnamon rolls. Bread. Coffee cakes.

## SEVENTH MONTH.

## I. Milk Lessons.

1. Composition, care of milk, bacteria common to milk. Souring of milk, controlling lactic bacteria. Cream testers and separators. Discussion of churns and thermometers. If possible give pupils an opportunity to make butter in class. Cottage cheese, floating island, junket ice cream. Freezers and freezing.
2. Milk products: Cheese, cheese fondu, Welsh rarebit.
3. Rice and potato croquettes with cheese sauce.

## II. Review.

1. Test on yeast breads, milk, milk products. House cleaning lesson (practice).
2. Review batters; plain cakes. Review baking; temperature, etc.

### III. Cakes and Icings.

1. Icing lesson: icing cake made day before.
2. Nut drop cookies: peanuts, hickory nuts, or walnuts.
3. Steamed pudding sauce.
4. Plain cookies.

#### EIGHTH AND NINTH MONTHS.

- I. School lunches planned and prepared.
- II. Home supper planned and prepared.
- III. Meat Lessons—Beef:
  1. (a) Composition.
  - (b) Cuts.
  - (c) Experiments: broiled steak prepared and cooked.
  2. Principles of roasting: roast beef.
  3. Creamed beef (left from roast). Meat scallop; hash.
  4. Pot roast (with vegetables).
  5. Croquettes: from left-over meat, using white sauce and bread crumbs.
- IV. Serve a breakfast consisting of fruit, either fresh or preserved; cooked cereals, eggs, toast and butter, and coffee. Teach pupils to serve balanced meals.

#### B. NINTH GRADE—SEWING.

(First half of school year. One double period daily.)

##### FIRST MONTH.

- I. Study of silk: Culture, life history of silk worm, the cocoon, silk reeling, manufacture of cloth, other uses of silk, artificial silk, silk industry.
- II. Teach mending and darning. After methods are learned, have pupils apply their knowledge to mending of clothing which needs repairing. These garments should be brought from home.
- III. Articles to be made: Centerpiece or table runner of Russian crash, showing how the darning stitch may be used in embroidering.

##### SECOND MONTH.

- I. Study of wool: Varieties, growth, culture, remanufactured goods, uses of woolen yarn, common woolen ma-

terials (samples to be mounted as in the first year's work), wool industry of the United States.

- II. Study of materials suitable for a school dress, with general discussion on quality to look for, color combinations, trimmings, etc.
- III. Making of a simple school dress of wash material.

#### THIRD MONTH.

- I. Study of linen: Growth of flax, varieties, culture, by-products, manufacture of yarn and cloth, common linen materials, uses of linen yarn, linen industry in the United States, other vegetable fibers.
- II. General discussion on personal appearance, neatness in dress, cleanliness, care of clothing.
- III. Continue work of last month on school dress, being careful that pupils get right idea of cutting, fitting, finishing. The finished garment should be as neat on the inside as on the outside.

#### FOURTH MONTH.

- I. Comparison of wool, cotton, silk, and flax; chemical difference, varying characteristics and properties, methods of adulteration of our common materials, and ways of testing them.
- II. Comparison of home-made and factory-made garments as to cost, quality, durability, and appearance.
- III. Making a lingerie waist. If necessary, six weeks may be given to this problem.

#### B. NINTH GRADE—COOKING.

(Second half of school year. One double period daily.)

#### FIFTH MONTH.

- I. Review study of meats as outlined for first year.
- II. Poultry:
  1. Dressing chickens to roast or to fry.
  2. Baking and frying of chickens.
  3. Made-over dishes of roast chicken.
- III. Soups:
  1. Stock soup; clear soup (of beef or chicken).
  2. Cream soups of tomato, corn, or peas.

## IV. Pork: Cuts; composition; compare with beef.

1. Pork chops and apple sauce.
2. Making of sausage: stuffing skins, or, preferably, muslin bags; to cure.

## V. Cuts of veal: Composition, digestibility.

## SIXTH MONTH.

## I. Study of fruits. Chemical composition, food value, cost, preservation, preparation and serving. Make special study of fruits of Louisiana, such as oranges, figs, etc. Use United States bulletins for accurate information.

1. Prepare stewed apples, baked apples, apple sauce (if apples are too expensive, use prunes or other dried fruit).

## SEVENTH MONTH.

## (Typical Louisiana products.)

## I. Rice: Its culture, harvesting, varieties, uses, value as food.

1. Boiled rice.
2. Rice croquettes.
3. Red beans and rice.
4. Rice curry.
5. Rice custard.
6. Rice jambalaya.

## II. Beans and peas (including soups).

1. Green or snap beans.
2. Green beans boiled with pork.
3. Lima beans.
4. Dried beans.
5. Baked beans.
6. Creamed peas.
7. Cream of pea soup.
8. New potatoes and peas.
9. Peas boiled with pork.

From a pound of beans, costing about five cents, one-fifth pound of protein and three-fifths pound of carbohydrates are obtained.

The same amount of protein in meat costs fifteen to twenty cents.

The use of canned fruits and vegetables and meats in home cooking.

Economic value of canned foods in the home. Cost compared with fresh products.

Make use of products of girls' canning clubs and school gardens when possible.

III. Peanuts: Culture, harvesting, variety, uses, value as food (human food or stock food).

IV. Products of sugar cane.

1. Manufacture of sugar.
2. Forms of sugar.
3. Food value of sugar.
4. Effects of heat on sugar.
5. Candy-making. Not more than two such lessons should be given during the year.

V. Any other product typical to certain localities should be studied in the same way.

#### EIGHTH AND NINTH MONTHS.

- I. Teach fish and oysters. Compare food values of these with that of meat. When fish cannot be obtained in the neighborhood market, interest some of the boys in supplying the kitchen.
- II. Planning a home breakfast, supper or luncheon. Points to be considered:
  1. Cost.
  2. People to serve.
  3. Season.
  4. Well-balanced meal.
  5. Marketing.
  6. Duties of the waitress.
  7. Duties of the hostess.
  8. Table manners.
  9. Dining room, linen, silver.
  10. Color scheme.
  11. Laying the table.
  12. Management in the kitchen during the serving of meal.



A LESSON IN TABLE MANNERS.  
(Farmers' Short Course, L. S. U.)

III. If possible, give each pupil opportunity to plan, prepare and serve at least one meal. Emphasize food value and cost in each case.

#### C. TENTH GRADE—HOUSEHOLD MANAGEMENT.

(One double period daily throughout the year.)

Sixty minutes of each period should be given to lecture and recitation work and twenty minutes to laboratory work.

##### FIRST MONTH.

- I. Discussion of terms Domestic Science, Domestic Art, Household Economy, Household Management and Home Economics. Be sure pupils understand these terms and decide on terms which include all others. Teach pupils what Home Economics stands for.

II. The Home: The aim of the home, ideals in establishing, education in the home, the mistress of the home, entertainment in the home. Confusion of terms house and home.

### III. The House:

#### 1. Development.

(a) Evolution of the house. Shelter of different people and ages.

(b) Comparison of modern and early houses.

#### 2. Location of the house and its surroundings.

(a) Soil and drainage.

(b) Exposure of the house. (Excursions should be made by class and lessons learned by observation.)

#### 3. House Planning.

(a) Cost.

(b) Appropriate style for surroundings.

(c) Size of rooms, arrangement of rooms, closets, pantries, bathrooms. (Criticise plans found in magazines.)

(d) Amount of plumbing, location of.

(e) Foundation.

#### 4. Materials to be used in the construction of the house. Consider walls, floors, plumbing, heating, and ventilation systems; lighting.

Visit a house in process of construction if possible.

#### 5. Estimate cost. (Give careful directions for notebook work.)

### SECOND MONTH.

### IV. Home Finishing and Decoration.

#### 1. Interior floors, walls, ceilings.

(a) Suitability.

- (b) Durability.
- (c) Cleanliness.
- (d) Beauty.

(A lecture by a good architect or a carpenter would be very instructive at this time.)

2. Furniture and furnishings. (Visit a furniture store.)
  - (a) Durability.
  - (b) Convenience.
  - (c) Appropriateness.
  - (d) Ease of keeping clean.
  - (e) Good and bad taste in furnishing.
3. Careful study of lighting, heating and ventilating systems.

#### THIRD MONTH.

### V. Kitchen.

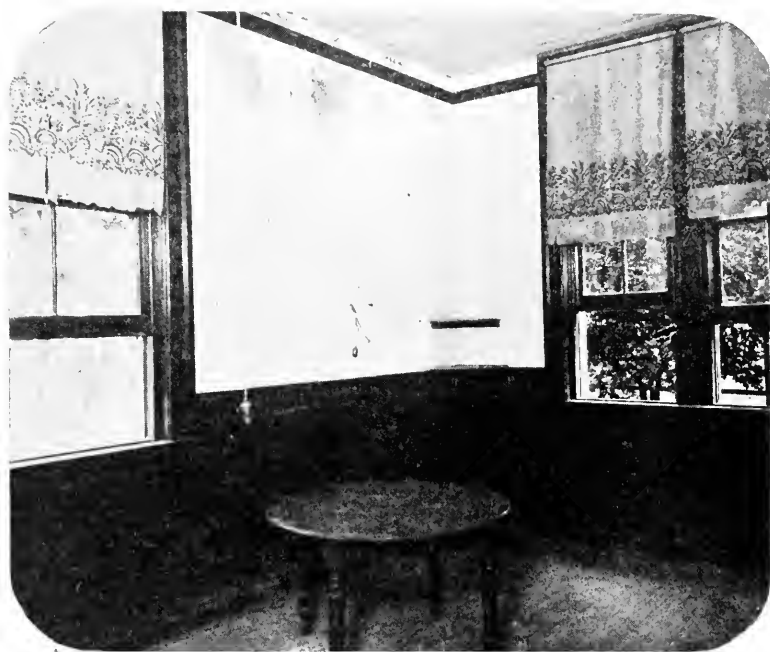
1. Requirements of a sanitary kitchen.
  - (a) Walls and floor coverings, relation to labor in caring for.
  - (b) Proper ventilation and lighting.
  - (c) Care of kitchen and kitchen equipment.
    - (1) Means of securing cleanliness.
    - (2) Importance of order and neatness.
    - (3) Disposal of kitchen wastes.
2. Equipment for convenient kitchen.
  - (a) Tables.
  - (b) Sinks.
  - (c) Refrigerator.
  - (d) Cupboards and pantries, which are mouse and insect proof.
  - (e) Flour and other food receptacles.
  - (f) Arrangement of furniture to save time, energy, steps. Make the best of existing conditions.

- (g) Study of choice, care, arrangement, and repair of the smaller utensils.
- (h) Cleaning of nickle, brass, tin, copper, zinc, granite, glass. (Make these lessons practical.)
- (i) Discussion of kitchen towels: number, method of making, laundering, hanging, drying.
- (j) Cupboard for materials and utensils used in cleaning.
- (k) Make a list of these materials and utensils.

#### FOURTH MONTH.

### VI. The Dining Room.

1. Discuss size, location with relation to other rooms, floors and floor coverings, wall covering which will suggest cheer and brightness, furniture that is durable and appropriate, simple furnishings, curtains and draperies.
2. Discuss arrangement of furniture and methods of making dining room serve as living room.
3. Care of linen, silver, and dishes when not in use.
4. Necessity for screening windows of kitchen and dining room.
5. Setting the table, method of serving, duties of waitress and hostess, table manners, dishwashing, removal of stains from tablecloth, mending and darning of table linen, review of French hemming, method of washing table linen, embroidering.



ROOM TO BE REMODELED.



CLASS AT WORK



DINING AND LIVING ROOM COMPLETE.

The above pictures illustrate the practical work of the class in household management at the Louisiana State University during the summer session of 1914. The class problem consisted in remodeling the room as shown in the first picture and making of this a combined living and dining room. The walls, floor, and woodwork required treatment; old furniture needed attention; the windows had to be screened, curtains made; and, to encourage resourcefulness and ingenuity, it was assumed that very little money could be expended.

From dry-goods boxes a window-seat was constructed, carefully lined and covered; two dilapidated armchairs were brought forth, padded and covered, and reinstated in the living room; a study table was also reclaimed and pressed into service.

The selection and arrangement of pictures, the hanging of curtains, the placing of tables and chairs, and other furnishings completed the work. The twenty-four girls who participated in this home-making problem have something more than theory—they have learned to do by doing.

The course in household management should be as practical as courses in sewing or cooking. It might be possible to get the use of a vacant room in or near the school to be fitted up by the girls themselves. The walls might be papered or calsomined, the woodwork painted or varnished, and the floor covered with matting. While one group is kept busy with this, have others making curtains, covering chairs, or making a window seat. The boys are always eager to show their skill with the hammer and saw. In this way, a very attractive living room may be made or a combination living room and dining room with well-creened windows and doors. The next problem may be the girl's bedroom.

## VII. The Bedroom.

1. Location with reference to other rooms, best floor covering and care of same, good shades and draperies, best light. Necessary furnishings, advantage of good healthful sleep, therefore a good bed with good springs. Proper size of sheets, pillows, etc. Have pupils make sheets and pillow slips and teach them how to make a bed. Use your own room for this lesson. Be sure that each girl gains valuable knowledge of how to make her own room neat, attractive and comfortable.

## VIII. The Bathroom: Study its furnishing and equipment, following the general plans in Part VII.

### FIFTH MONTH.

## IX. The Care of the House.

1. Requirements of a sanitary house.
  - (a) Sources, kinds and dangers of dirt.
  - (b) How to prevent accumulations of dirt.
  - (c) How to remove dirt.
    - (1) Systematic cleaning of rooms.
    - (2) Special methods for various rooms

- (d) Care of woods, metals, leather, glass, floors, walls, linens, hangings.
  - (e) Agents used in securing sanitary conditions.
    - (1) Nature's agents: sun, air, water.
    - (2) Chemicals, soap, soap powders, agents for softening water, chemicals for removing stains, deodorants, disinfectants, antiseptics.
  - 2. Household pests and means of destroying them (teach necessity for screening).
  - 3. Disposal of wastes to prevent:
    - (a) Obnoxious gases.
    - (b) Breeding of flies.
    - (c) Pollution of water.
  - 4. Repairs.
- X. Daily Routine of Household Work.
- 1. Necessity for thought and system in:
    - (a) Planning daily routine, weekly plans, monthly plans.
    - (b) Division of labor.
  - 2. Study of the household service problems.
    - (a) Point of view of mistress.
    - (b) Point of view of maid.
    - (c) Suggestions for solution of the problems.
    - (d) Give general directions for sweeping, dusting, cleaning of matting, method of washing windows, cleaning of painted woodwork. Make these lessons practical by having pupils really do the work. Give lectures in connection with the practical work. Have pupils make out a daily program to be used at home.

#### SIXTH MONTH.

- 3. Household conveniences.
  - (a) Conveniences that make a house modern.
    - (1) Water system and sewerage disposal.
    - (2) Heating and lighting system.

## (b) Helps in housekeeping.

- (1) Discussions and lessons if possible, using fireless cooker which will do baking as well as boiling.
- (2) The water cooler.
- (3) The dustless mop and dusters.
- (4) Value of a dress form to a woman who does her own sewing.
- (5) The vacuum cleaner.
- (6) Cement walks; help in housekeeping, estimated cost.
- (7) List made of utensils which are not commonly found but which would be very useful in general housework.

(Each member of the class should have an opportunity of supervising the cleaning and care of one or two rooms for a week.)

## SEVENTH MONTH.

## XI. Household Expenditures.

1. Necessity of keeping record of expenses so that family will not live beyond means.
2. Teach simple system of keeping accounts, showing how the percentage of the income allowed for each division will depend chiefly on the size of the income and the ideals or standards of the family. Lead the pupils to see the difference between the necessities and luxuries. Give the ideal budgets as suggested by Ellen H. Richards, showing the division of incomes varying from \$500 to \$4000. Lead pupils to see how the high cost of living is due to waste, buying out of season, buying perishable food stuff, fads or fashions for dishes. Try to persuade the girls of the class to keep accounts in their homes.
3. Personal Accounts.  
Teach reasons for keeping personal accounts, best methods to use, meaning of "clothing budg-

et.” Encourage the girls to keep account of all the money spent for clothing during the year. Economical planning of clothing, clothing budget which averages \$65.00 per year. Plan another at \$100.00 for girl making her undergarments and shirt waists.

#### EIGHTH AND NINTH MONTHS.

- XII. Water supply and disposal of waste in community where school is located. Sources of water and its filtration. Disposal of refuse. Draining and plumbing.
- XIII. Laundering of clothes. Necessity of study of personal and household laundry. Intelligent use of chemicals. Best kind of soap to use, methods of softening water. Mending and removing of stains before washing clothes, best methods of washing, bluing, starching and drying. Ironing and care of irons. Necessity for marking clothing and methods. It is not necessary to have an equipment for teaching this. Make use of utensils you already have.
- XIV. Home Nursing.

1. Invalid cookery. Liquid, soft, light and full diet. Rules for serving the sick. Application; dishes for the sick.
2. Care of the sick room. Proper way to make a bed.

#### D. ELEVENTH GRADE—COOKING.

(First half of school year. One double period daily.)

An effort should be made during the senior year of the high school to round out the course in home economics, and make it more complete by means of lectures, demonstrations, excursions, reference readings, and general discussions. Food study should correlate with cooking lessons.

#### FIRST MONTH.

- I. Preservation of food.
1. Reasons for preserving food.
  2. Methods: Refrigeration, canning, drying, use of preservatives.



METHODS OF HOME CANNING. (Farmers' Short Course, L. S. U.)

II. Canning, jelly making, pickling, and preserving of fruits and vegetables, using steam pressure canner with tin cans; also canning and preserving in glass jars (various methods).

III. Digestion of foods.

1. The cell, its structure, functions, its powers, stages in the life of a cell.
2. The tissues. Define, name kind, state functions.
3. Purpose of digestion.
4. How food is dissolved in the mouth, in the stomach, in the intestines.
5. Absorption of food and necessary requisites.
6. Assimilation. Explain process, tell of circulatory systems concerned.
7. Excretion. Explain processes.

## IV. Relation of cookery to digestion.

1. Necessity for variety and balance in foods.
2. How foods differ in ease of digestion.
3. How method of cooking affects foods.
4. Digestion affected by flavors or appearance of foods.
5. Mastication in eating.
6. Moderation in eating; necessity of regular hours.
7. Cheerfulness necessary to good digestion.

## SECOND MONTH.

- I. Beverages. Tea, coffee, chocolate, cocoa. Sources, composition. Food value, preparation for market and table.
- II. Doughs. Review breadmaking.
- III. Making of cookies and gingerbread.
- IV. Pastry: Essentials, proportions, methods, two crust pies, time for baking.
- V. Cake making.
- VI. Desserts. Hot puddings, cold desserts.
- VII. Health.

## 1. Human body.

- (a) Structure of human body.
- (b) Function of human body.
- (c) Removal of waste of body.
- (d) Necessity of daily baths, clean clothes, good habits, proper food, relation of good food to good work.
- (e) Care of the body as to rest, fresh air, exercise
- (f) Care of the hair, teeth, skin.

## THIRD MONTH.

- I. Making of palatable and wholesome sandwiches of meat, fish, fruit, eggs or nuts.
- II. The cold lunch for school.
- III. Lunches for the workingman, the traveler, the picnic, the cold supper.
- IV. Food materials.
  1. Production and manufacture, intelligent buying and care of foods, economical value depending on expenditure of time, labor, fuel, as compared with food value received.

2. Adulterations of food, methods of detecting in foods which are easily adulterated, pure food laws, review of study of milk, emphasizing adulteration and preservatives.

V. Sanitation as regards to foods.

1. Causes of the spoiling of foods.
2. Prevention of food decomposition.
3. Dust and flies in their relation to foods.
4. Selection of food from a market having sanitary conditions.
5. Storage and care of food.
  - (a) Commercial methods.
  - (b) Home storage.
  - (c) Care of vegetables, fruits, dairy products, eggs, meats, fish, breads, cakes, spices and canned fruit.
6. Handling of foods by dealer and housekeeper.
7. Pure food laws.
8. Public ordinances regarding sanitary conditions of markets and eating houses.

FOURTH MONTH.

- I. The dining room: Location, furniture, general care of the room.
- II. Table linen. How to determine good quality in buying; how to launder table linen, methods of repairing, use of silence cloth, how to spread table cloth.
- III. Setting the table.
- IV. Duties of waitress. Rules for serving.
- V. Dietaries: Planning of menus.
  1. Food requirements for different conditions, depending on age, sex, habits, physical conditions and climate. Comparative food value and cost of foods. Meaning of calorie.

## D. ELEVENTH GRADE—SEWING.

(Second half of school year. One double period daily.)

## FIFTH MONTH.

- I. Review fiber study (cotton).
- II. Study of dress: Ready to wear, home-made clothing, cost of clothing for a year, low, medium and high.
- III. Making of a plain tailored skirt. (Cotton.)

## SIXTH MONTH.

- I. Review fiber study (wool).
- II. Study of dress. Relative cost of home-made, tailor, and ready to wear clothing. Give concrete example in this.
- III. Garments to be made: Tailored shirt waist with plackets in sleeves. If there is time make lingerie waist.
- IV. Hygiene of clothing.
  1. The hygienic importance of clothing.
  2. When is the body well clothed.
  3. Relation of clothing to body heat.
  4. Relation of clothing to absorption.
  5. Clothing and cleanliness.
  6. Danger in buying ready made garments which have been made in sweat shops.

## SEVENTH MONTH.

- I. Review fiber study (silk).
- II. Study of dress. Design, measure of harmony, essentials of a beautiful gown, appropriateness in gowns.
- III. Designing of a dress or costume.
- IV. Garments to be made: Lingerie dress suitable for graduation.

## EIGHTH AND NINTH MONTHS.

- I. Review fiber study (linen).
- II. Study of adulterations of our common materials and ways of testing them.
- III. Practical work in testing cloth.

- IV. Care and repair of clothing: Daily care of clothing, use of hangers, airing of clothes, use of cover bags for gowns, careful brushing, pressing, care of clothing between seasons, renovation and cleaning of clothing, dyeing, removal of stains, mending and remodeling, care of shoes and rubber.
- V. Making of case or bag to cover and protect a dress on hanger.

## Equipment for Teaching Home Economics.

### PRINCIPLES OF SELECTION.

If the equipment is too meagre, the work is restricted and girls do not learn the value of good utensils; if too elaborate, ingenuity is not developed and girls get extravagant ideas that are not practical in the home. Therefore, it is well to use great care in selecting so that both extremes may be avoided.

A distinction should be made between equipment and maintenance. Equipment includes all stationary furnishings and all furniture and apparatus which can be used from year to year; maintenance or yearly supplies includes all materials used to carry on the work.

The cost of equipping a school depends upon the number of students to provide for, on the kind of equipment, and upon the methods of work.

### EQUIPMENT FOR SCHOOL KITCHEN.

The ideal class averages sixteen, but an equipment for twenty-four is commonly used. Work is conducted by the group method (girls working in groups of two), or the individual method, each working alone.

#### TABLES.

Separate group tables may be used, or a long continuous table with places for working on either side, oblong or hollow square. The table should represent an ideal for the home kitchen and need not be expensive if made by the local carpenter. (See working drawing.)

## TABLE TOPS.

The tops of the tables may be made of various materials, (1) selected white maple with a fine, hard finish gives good service, (2) white enamel iron tops are sanitary, attractive, durable, but expensive, (3) zinc-covered tops are good when new, but warp easily, (4) glass tops are not practical. Small gas burners on the tops of the tables are used, a burner for each girl.

Attachments must be permanent, and there should be as little piping on top of the tables as possible.

## GENERAL EQUIPMENT FOR KITCHEN.

- 1 cooking stove (wood, coal or gas range).
- 2 enamel sinks.
- 1 supply table. (This table may be used for dining table if no better is obtainable.)
- 1 water boiler and gas heater.
- 1 ice box.
- 1 instruction table or desk, with chair. Blackboards.
- 1 set of tables for sixteen girls (to form hollow square).
- 1 supply closet or pantry with shelves.

## EQUIPMENT FOR EACH DESK.

(For two girls.)

- 1 two-plate gas burner.
- 2 16-inch rubber tipped stools.

## ENAMEL WARE.

- 2 mixing bowls,  $1\frac{3}{4}$  qts.
- 2 double boilers.
- 2 sauce pans with covers, 2 qts.
- 2 utility pie pans.
- 2 waste jars, with covers.
- 2 custard cups, size  $2\frac{3}{4}$  inches.
- 2 seamless dish pans,  $16 \times 5\frac{1}{2}$  inches.
- 1 pitcher, 2 qts.

## TIN WARE.

- 2 pie tins, 6 inches.
- 1 flour dredger.
- 1 set salt and pepper shakers.

- 1 biscuit cutter, 2 inches.
- 1 small grater, half-round.
- 1 cake turner, black wooden handle.
- 1 measuring cup.

## WIRE WARE.

- 1 wire strainer, fine.
- 1 Dover egg-beater, cup size.
- 2 egg whips.

## WOODEN WARE.

- 1 small rolling pin, 12 inches.
- 2 vegetable brushes.
- 2 asbestos mats, with wire.
- 1 slotted spoon, holly wood.

## IRON AND STEEL WARE.

- 2 7-inch steel frying pans.

## CUTLERY.

- 2 good quality black handled steel knives.
- 2 steel forks of same quality.
- 2 paring knives.
- 2 6-inch spatulas.
- 2 metal tablespoons.
- 2 metal teaspoons.

## GLASS WARE AND CROCKERY.

- 2 white porcelain cups.
- 2 white porcelain saucers.

## SUPPLY CLOSET.

## ENAMEL WARE.

- 2 double boilers, 3 qts.
- 1 sauce pan, 3 qts., with covers.
- 1 sauce pan, 4 qts., with cover.
- 2 mixing bowls,  $1\frac{1}{4}$  qts.
- 2 mixing bowls,  $\frac{1}{2}$  qt.
- 3 seamless milk pans, 2 qts.
- 3 seamless milk pans,  $1\frac{1}{2}$  qts.
- 2 seamless deep pudding pans, 6 qts.
- 1 coffee pot, 4 qts.
- 1 quart measure.
- 2 milk strainers.

- 2 colanders, 10 inches.
- 1 dipper, 1 qt.
- 2 preserving kettles, 8 qts.
- 2 tea kettles, 8 qts.

## TIN WARE.

- 2 biscuit sheets, 10x14 inches.
- 6 bread tins, 3x8x5 inches.
- 4 round loaf cake pans.  
medium size for angel cake.
- 6 square loaf cake pans.
- 2 jelly molds, 1 qt.
- 2 apple corers.
- 2 No. 2 Arctic fruit presses.
- 1 funnel.
- 1 ice cream brick, 1 qt.
- 2 pie pans, perforated bottom.
- 1 steamer, 10 $\frac{1}{4}$  inches.
- 2 oblong cake pans.
- 2 handle flour shakers, medium.
- 1 small sugar scoop.
- 2 nutmeg graters.

## CUTLERY AND INSTRUMENTS

- 1 knife sharpener.
- 3 larding needles.
- 1 set steel skewers.
- 2 mincing knives (double).
- 2 bread knives, extra quality.
- 1 meat knife, 8 inches.
- 1 self-pulling corkscrew.
- 1 potato chip slicer.
- 1 potato scoop,  $\frac{1}{2}$  inch.
- 1 basting spoon, 16 inches.
- 1 pair shears.

## GLASS WARE AND CROCKERY.

- 6 lemon squeezers.
- 4 dozen jelly glasses, with covers.
- 4 dozen glass jars, pints, for canning.
- 1 dozen pint glass jars, with covers, for supplies.

- 1 dozen quart glass jars, with covers.
- 2 white earthen bowls, 10 inches.
- 2 white earthen bowls, 12 inches.

## JAPANNED TIN WARE.

- 1 flour can, with sifter, 100-lb. size.
- 1 bread box, 10x10x15.
- 1 sugar box, 10-lb.
- 1 dust pan.
- 2 nickel trays, 20x30 inches.
- 1 nickel tray, 12x14 inches.

## WIRE WARE.

- 1 waste basket.
- 2 meat forks.
- 2 chain cleaners.
- 2 frying baskets.
- 2 extension strainers.
- 2 soap shakers.
- 1 cake cooler.

## SHEET AND CAST IRON WARE.

- 2 steel frying pans, 9 inches.
- 2 steel frying kettles, 9 inches, extra deep, flat bottoms.
- 1 steel covered roaster.
- 1 family scale.
- 1 bread-stick pan, steel, 12 hole, 5 inches long.
- 1 ice cream scoop.
- 2 food grinders.
- 1 call bell.
- 1 chisel.
- 2 Sprague can openers.
- 1 round waffle iron.
- 1 cake griddle.
- 1 baking sheet for fish.

## WOODEN WARE.

- 2 1-gallon ice cream freezers.
- 1 1-quart ice cream freezer.
- 1 scrubbing brush.
- 1 stove blacking brush.

- 1 bottle brush.
- 1 fish plank, 14 inches.
- 1 wooden mallet, 3x5 inches.
- 2 butter paddles.
- 2 wooden spoons.
- 2 brooms.
- 1 whisk broom, medium.
- 1 long handled mop.
- 1 clothes rack.
- 2 chopping bowls.
- 1 salt box.
- 1 thermometer.
- 1 clock.

## GLASS WARE AND CROCKERY.

- 1 white bowl, small size.
- 2 white china plates, 7 inches.
- 2 brown and white covered casseroles, 5½ inches.

## TOWELS, PAPERS, ETC.

- 36 dish towels.
- 36 dish cloths.
- 3 yards cheese cloth for washing meat and fish.
- 2 strainer bags for jelly.
- 1 canvas bag for ice.
- 16 pot holders.
- 1 ball of white twine.
- 1 roll plain manilla paper for draining fried materials on.
- 3 rolls oiled paper for sandwiches.

The above list represents a part of an equipment costing from \$400 to \$500. It would need to be cut down for an equipment costing from \$200 to \$300. In cutting down this list fewer articles could be furnished to each pupil and a number of utensils could be omitted, as, for instance, the set of larding needles. The ice cream freezer can be omitted and a home-made variety used.

## B. EQUIPMENT FOR DINING ROOM.

## I. Furniture and Furnishings.

- A table, round or square.
- Six chairs.

China closet.

Side board or buffet.

Rug for the floor.

Plain shades and curtains.

II. China. For general equipment, a smaller dinner set is sufficient.

6 5-inch plates.

6 7-inch plates.

6 8-inch plates.

1 8-inch vegetable dish.

1 10-inch platter.

1 sugar bowl.

1 creamer.

1 covered butter plate.

6 cups and saucers.

1 sauce boat.

6 after-dinner coffee cups.

6 fruit dishes.

6 soup plates.

1 covered dish.

6 drinking glasses.

1 glass pitcher.

3 sets salt and pepper.

2 compote dishes.

1 glass vase.

III. Cutlery.

1 set silver plated knives.

1 set silver plated forks.

1 set silver plated tablespoons.

1 set silver plated teaspoons.

1 butter knife.

1 carving set.

IV. Linen for dining room.

2 linen table cloths.

1 dozen linen napkins.

1 silence cloth.

1 center piece.

2 tray cloths.

### C. EQUIPMENT FOR SEWING ROOM.

#### I. Location of rooms.

1. Preferably second floor.
  - (a) Better air and light.
  - (b) Fewer distractions.
2. Light from two sides; the southwest or northeast rooms are pleasant in the forenoon.
3. The light entering the room should be at the left and at the back of students whenever possible.

#### II. Size and shape.

1. There is much advantage in a square or slightly oblong room.
2. A long and narrow room provides waste space and is usually very inconvenient.
3. Approximate sizes of rooms depending on the number of students are as follows:  
 For sewing class of 16, 20x25 feet.  
 For sewing class of 24, 28x28 or 26x30.

#### III. Decoration.

1. Wall should be medium light restful color, best painted. If paper is used it should by all means be all of one tone. Cartridge paper is very suitable.
2. Everything in the room should be very plain. Anything which serves as a dust catcher and is useless should be considered unnecessary.
3. Good blackboards are essential in this room.

#### IV. Sewing room equipment.

1. Tables. (a) one large drafting table, four drawers on each side, 38"x80"; (b) large sewing tables without drawers (62x34); (c) adjustable sewing tables of birch may be used. These are 28" in height, top 28"x40".
2. Sewing chairs. Dark oak or good woven cane seat chairs.
3. Sewing machines: Singer, Domestic, New Home, or Standard. One machine for each group of three girls.

4. Cupboards must be provided in which to keep supplies and individual boxes of students. This may be a combination of cupboard and show case for display of finished work.
5. Mirror, large hanging mirror for use in fitting.
6. Demonstration frame or stand covered with Java canvas.
7. Drafting paper in rolls or in frame.
8. Forms. These may be bust forms or bust and skirt combined.
9. Waste basket.
10. Yard stick.
11. Clock.

Estimated cost of equipment for kitchen and dining room. \$400.00

Estimated cost of equipping sewing room. .... 200.00

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Total. .... \$600.00

### **Departments of Home Economics in Four-room Schools of the State.**

To outline a definite course of study for the rural school would be impractical. The following plan is merely suggestive and should be rearranged to meet the needs of the community in which it is to be used. It assumes the endowment of common sense in the teacher in addition to a good special training in an approved institution on a foundation of at least a liberal high school education.

For the purpose of presenting a classification of the household industries which will be capable of expansion into further advanced courses of study as the needs for them may arise, the following grouping is submitted:

- I. The industries connected with food.
- II. The industries connected with clothing.
- III. The industries connected with shelter.

Teachers of these subjects should keep in mind the desire in the state to promote a broad endeavor along the lines of adapting education to the broad and varied needs of its people. It rests largely with the teachers of these subjects to impress upon their

students the inferences to be drawn from the lessons. Such instruction in the rural schools should result in an elevation in the standards of nutrition; a more appropriate and artistic style of clothing, more comfortable and attractive houses; the attainment of maximum efficiency in woman's activities at the minimum cost of energy, time, and money.

The subjects which may be correlated with home economics are, first and foremost, hygiene. This emphasizes wholesome surroundings as a result of cleanliness and personal physical care, and takes the student and teacher into the field of physiology. The sources of food, clothing, and shelter materials, their cultivation, manufacture, and transportation are legitimately in the field of geography. Nature study will be particularly serviceable in connection with the structure, composition, and cultivation of food stuffs. The development of all industries is intimately related to the history of people and countries if that phase of social life is studied as well as the political history. Arithmetic plays its important part in calculations, estimates, proportions, and the keeping of accounts. In all the written as well as verbal work the English language is the medium used which furnishes a continuous opportunity for its improvement through correction and suggestion toward the attainment of concise and adequate expression.

The following lessons are capable of expansion or contraction, according to the local needs and possibilities.

## **Course of Study for Sixth and Seventh Grades of Rural Schools.**

### **A. SIXTH GRADE.**

- I. Sewing. (First half of session.)
- II. Cooking. (Second half of session.)
- III. Household Management. (Daily throughout the year.)

### **B. SEVENTH GRADE.**

- I. Sewing. (First half of session.)
- II. Cooking. (Second half of session.)
- III. Household Management. (Daily throughout the year.)

## A. SIXTH GRADE—SEWING.

(First half of session. Three double periods per week.)

- I. Stitches to be learned, basting, running, overhanding, chain and hemstitch.
- II. Articles to be made.
  1. Sewing bag to carry work to and from school.
  2. Dish towel, duster, iron holder, needle book, table cover, window curtains, dresser scarf.
- III. Cooking apron.
  1. Drafting of pattern to individual measurement (see directions on page 10).
  2. Economical placing of pattern.
  3. Best method of cutting.
  4. Basting and hemming, and putting on hem.
  5. Making button holes and sewing on buttons.
  6. Careful pressing of finished work.
- IV. Mending and darning. After methods are learned have pupils apply knowledge to mending of clothing which needs repair. These garments should be brought from home.
- V. Table runner or center piece. Apply darning stitch to embroidery.

## A. SIXTH GRADE—COOKING.

(Second half of school year. Three double periods per week.)

- I. Care of the kitchen, tables, stoves, utensils, cupboards, and food supplies.
- II. Direction as to personal cleanliness.
- III. General discussion of foods.
  1. Sources; animal and vegetable.
  2. How they differ in composition.
  3. Uses in the body.
- IV. Table of weights and measures and practice in measuring foods by the tablespoon, teaspoon, cup, etc.
- V. Study of fruits.
  1. Fruits native to the locality, such as oranges, figs, peaches, bananas, etc.
  2. Methods of serving for breakfast.

3. Lessons in preserving (1) canned peaches; (2) orange marmalade; (3) preserved figs; (4) strawberry jelly.
- VI. Breakfast cereals, such as grits, cornmeal, oatmeal.
  1. Study of grains and methods of making breakfast cereals in factories.
  2. Lessons in preparing cooked cereals, emphasizing necessity for long cooking.
  3. Use of left-over cereals in making cakes or croquettes.
- VII. Eggs for breakfast (tissue building foods).
  1. Hard and soft cooked eggs.
  2. Scrambled eggs.
  3. Omelet with bread crumbs and white sauce.
  4. Eggs poached and served with toast.
- VIII. Quick breads.
  1. Biscuit (baking powder and drop biscuit).
  2. Corn bread.
  3. Muffins, plain, graham, corn.
- IX. Coffee and cocoa.
- X. Simple home breakfast.
  1. Setting table.
  2. Planning the meal.
  3. Preparing the meal.
  4. Serving the meal.
  5. Management of kitchen, including care of soiled dishes and left-over food.

#### B. SEVENTH GRADE—SEWING.

(First half of session. Three double periods per week.)

- I. Kimona nightgown, combining hand and machine sewing.
  1. Study of materials suitable for undergarments.
  2. Kinds of seams used in undergarments.
  3. Study of pattern.
  4. Cutting, basting, fitting.
  5. Simple methods of trimming, avoiding use of colored ribbons.
- II. Making of drawers, giving special attention to plackets and bands.
- III. Plain princess slip or underskirt.

## B. SEVENTH GRADE—COOKING.

(Second half of session. Three double periods per week.)

## I. Soups.

1. Cream soups: (a) tomato, (b) cream of pea, (c) bean (d) making of croutons.
2. Soup with stock: (a) bouillon, (b) vegetable soups, (c) mutton broth.

## II. Meats.

1. Study of beef, veal, mutton, pork.
2. Care of meat in the house.
3. Various ways of cooking meats and poultry produced in the community.

## III. Fish and oysters.

## IV. Vegetables.

1. Potatoes: baked, stuffed, boiled, fried, mashed, creamed, scalloped.
2. Rice (served as a vegetable): boiled, rice croquettes, red beans and rice, rice curry, rice jambalaya.
3. Carrots, beets, turnips, onions, beans, peas, etc.

## V. Light bread.

1. Ingredients used in bread making.
2. Milling of flour.
3. By-products of wheat.
4. Study of yeast.
5. Making of bread; care after baking.
6. Uses of stale bread in bread pudding, preparing bread crumbs for scalloped dishes, etc.

## VI. Vegetable salads.

## VII. Simple desserts.

1. Baked custards.
2. Baked apples.
3. Cottage pudding with lemon sauce.

## VIII. Dinner planned, prepared and served by girls to parents or members of school board.

## IX. School lunch.

1. General discussion of palatable, easily digested, and wholesome lunch for school child.

2. Lunches planned and interest aroused in learning to cook those foods which may be brought to school.
3. Suggestion for the school lunch:
  - (a) Meat sandwiches: (1) meats to be used; (2) methods of slicing or grinding and mixing with salad dressing.
  - (b) Tomato sandwiches with salad dressing.
  - (c) Peanut butter made at home, used with sandwiches.
  - (d) Parched peanuts ground and mixed with preserves and used in making sandwiches.

### HOUSEHOLD MANAGEMENT.

(One period daily.)

SIXTH AND SEVENTH GRADES.

#### I. The house.

1. The location and surroundings, flowers, trees, etc.
2. Soil and drainage.
3. Farm house planning.
  - (a) Farm house compared with city dwelling.
  - (b) New and remodeled farm house.
4. Materials used in construction.
5. Cost estimated.
6. Interior finish of walls, floors, ceilings.
7. Furnishing.

#### II. Kitchen.

1. Requirements of a sanitary kitchen.
  - (a) Walls and floor coverings, relation to labor in caring for.
  - (b) Proper ventilation and lighting.
  - (c) Care of kitchen and kitchen equipment.
    - (1) Means of securing cleanliness.
    - (2) Importance of order and neatness.
    - (3) Disposal of kitchen wastes.

#### III. Dining room.

1. Discuss size, location with relation to other rooms, floors, best covering, wall covering which will

suggest cheer and brightness, furniture which is durable and appropriate, furnishings simple, curtains and draperies.

2. Discuss arrangement of furniture and methods of making dining room serve as living room.
3. Care of linen, silver, and dishes when not in use.
4. Necessity for screening windows of kitchen and dining room.
5. Setting the table, method of serving, duties of waitress and hostess, table manners, dishwashing, removal of stains from table cloth, mending and darning of table linen, review of French hemming, method of washing table linen, embroidering.

The course in household management should be as practical as courses in sewing or cooking. It might be possible to get the use of a vacant room in or near the school to be fitted up by the girls themselves. The walls might be papered or calsomined, the woodwork painted or varnished, and the floor covered with matting. While one group is kept busy with this, have others making curtains, covering chairs, or making a window seat. The boys are always eager to show their skill with the hammer and saw. In this way a very attractive living room may be made or a combination living room and dining room with well-screened windows and doors. The next problem may be the girl's bedroom.

#### IV. The bedroom.

1. Location with reference to other rooms, best floor covering and care of same, good shades and draperies, best light, a softened one for sleeping room. Necessary furnishings, advantage of good healthful sleep, therefore a good bed with good springs. Proper size of sheets, pillows, etc. Have pupils make sheets and pillow slips and teach them how to make a bed. Use your own room for this lesson. Be sure that each girl gains valuable knowledge on how to make her own room neat, attractive and comfortable.

## V. Bathrooms.

1. Plumbing.
2. Possibilities of running water.
3. Plans for fitting up country bathroom.

## VI. Care of house.

1. Requirements of a sanitary house.
  - (a) Sources, kinds, and dangers of dirt.
  - (b) How to prevent accumulation of dirt.
  - (c) How to remove dirt.
    - (1) Systematic cleaning of rooms.
    - (2) Special methods for various rooms.
  - (d) Care of woods, metals, leather, hangings, glass, floors, walls, linens.
  - (e) Agents used in securing sanitary conditions.
    - (1) Nature's agents: sun, air, water.
    - (2) Chemicals, soap powders, agents for softening water, chemicals for removing stains, deodorants, disinfectants, antiseptics.
2. Household pests and means of destroying them.  
(Teach necessity for screening.)
3. Disposals of wastes to prevent:
  - (a) Obnoxious gases.
  - (b) Breeding of flies.
  - (c) Pollution of water.

## VII. Daily routine of household work.

1. Necessity in thought and system in:
  - (a) Planning daily routine, weekly plans, monthly plans.
  - (b) Division of labor.
2. Study of the household service problem.
  - (a) Point of view of mistress.
  - (b) Point of view of maid.
  - (c) Suggestions for solution of the problems.
  - (d) Give general directions for sweeping, dusting, cleaning of matting, method of washing windows, cleaning of painted woodwork. Make these lessons practical by

having pupils really do the work. Give lectures in connection with the practical work. Have pupils make out a daily program to be used at home.

(Each member of the class should have an opportunity of supervising the cleaning and care of one or two rooms for a week.)

#### VIII. Laundering of clothes.

1. Necessity of mending clothing before laundering.
2. Removal of stains.
3. Methods of softening water.
4. Intelligent use of chemicals and laundry soap.
5. Methods of washing, bluing, starching, drying.
6. Ironing. Care of irons. Use of gasoline iron.

#### IX. Poultry raising.

1. Classification.
2. Houses and enclosures.
3. Management of hens for egg production.
4. Raising chickens.
5. Fattening poultry.
6. Marketing poultry and poultry products.
7. Preserving eggs.
8. Diseases and insect pests.

### **Equipment for Teaching Home Economics in the Rural Schools, at a Minimum Cost of \$100.**

Home economics would be installed in many country schools if the superintendents could know that an equipment may be serviceable and comparatively inexpensive.

Two rooms are almost necessary, one for the kitchen and the other for the dining room, where the girls are taught serving and care of the dining room. One large room may be used if two are not available. It is possible to use the regular class room for sewing, cooking and household management.

#### I. Kitchen equipment for class of twelve.

1 large range .....	\$25.00
1 coal oil stove.....	10.00
1 cupboard made of two good boxes.....	
1 cupboard (rat proof).....	3.00
1 dozen paring knives.....	1.00
1 dozen forks (steel with wooden handle).....	1.75
1 dozen tablespoons (nickle plated).....	1.50
1 dozen teaspoons .....	1.80
3 baking dishes .....	1.25
3 frying pans .....	.50
6 small dish pans.....	1.50
6 mixing bowls .....	.60
3 graters .....	.30
3 baking pans .....	.30
1 dozen measuring cups.....	.60
6 porcelain plates .....	.38
3 Dover egg-beaters .....	.30
3 biseuit cutters .....	10
1 wire strainer .....	.10
6 fruit jars for salt, soda, etc.....	.25
2 water pails .....	1.00
10 yards of toweling .....	1.00

II. Dining room equipment. (A table, round or square, may be borrowed from class room.)

6 chairs .....\$ 4.00

Small dinner set consisting of:

6 cups and saucers.....	.60
6 plates (medium size).....	.60
1 platter .....	.15
2 vegetable dishes .....	.50
6 plated knives .....	.60
6 plated four-pronged forks.....	.60
salt and pepper shaker (glass).....	.60
6 drinking glasses .....	.60
sugar and creamer and teapot.....	1.00
1 table cloth .....	2.50

III. Sewing room equipment.

1 Singer sewing machine.....	\$30.00
1 demonstration frame .....	.15

## BIBLIOGRAPHY.

Courses in home economics are as yet so new that the work lacks organization and unity. Few books have been written for use as texts in any division of the subject; and none have been prepared specially for the class work of a definite grade, and covering a definite division of the subject matter. But, notwithstanding the lack of text-books, certain well-defined subdivisions of the whole field are pretty generally accepted. These are: (a) cooking and food study; (b) sewing and textiles; (c) household management. The following books are suggested for students of the high school, to be used largely as text-books. These texts are to be supplemented by reference books in the home economics library.

## A. COOKING AND FOOD STUDY.

## I. Eighth and Ninth Grades.

1. Domestic Science Principles and Application. Bailey. Webb Publishing Co., St. Paul, Minn.
2. Theory and Elements of Cookery. Williams and Fisher.

## II. Advanced Cooking. Eleventh Grade.

1. Domestic Science. Bailey.
2. Nutrition and Diet. Conley.

## B. SEWING AND TEXTILES.

## I. Eighth and Ninth Grades.

1. Goodwin's Course in Sewing, I, II, III. 60 cents each. F. D. Beattys Co., 225 Fifth Avenue, New York.
2. How the World Is Clothed. Carpenter.
3. Shelter and Clothing. Kinne and Cooley.

## II. Eleventh Grade. Sewing.

1. Shelter and Clothing. Kinne and Cooley.
2. Household Textiles. Gibbs.

## C. HOUSEHOLD MANAGEMENT.

## I. Tenth Grade.

1. Shelter and Clothing. Kinne and Cooley.
2. Household Management. Terril.
3. The House. Bevier.

## Books, Bulletins and Magazines for Reference and Supplementary Reading.

### I. BOOKS USEFUL IN TEACHING COOKING AND FOOD STUDY.

Boston Cooking School Cook Book. Farmer. (Little-Brown, \$2.)

Boston Cook Book. Lincoln. (Little-Brown, \$2.)

Century Cook Book. Arnold. (Century, \$2.)

Food and Cookery for the Sick and Convalescent. Farmer. (Little-Brown, \$1.50.)

Practical Cooking and Serving. Hill. (Doubleday-Page, \$2.)

Home Science Cook Book. Lincoln and Barrow. (Whitcomb, \$1.)

New Cook Book and Marketing Guide. Parloa. (Estes, \$1.50.)

Camp Cookery. Kephaut. (Outing Publishing Co., \$.70.)

Theory and Elements of Cookery. Williams and Fisher. (Macmillan, \$1.)

Lessons in Cooking Through the Preparation of Meals. Robinson and Hammel. (American Book Co., Chicago, \$1.50.)

French Household Cooking. Keyzer. (Whitcomb and Barrow, \$.60.)

Good Luncheons for Rural Schools. (Whitcomb and Barrow, \$.10.)

How the World is Fed. Carpenter. (American Book Co., New York, \$.60.)

Chemistry of Cooking and Cleaning. Richards and Elliott. (Whitcomb and Barrow, Boston, Mass., \$1.)

Food and Its Functions. Knight. (Whitcomb and Barrow, \$1.)

Bacteria, Yeasts and Molds in the Home. Conn. (Ginn & Co., \$1.20.)

Bacteriology, Household. Buchanan. (Macmillan, \$2.25.)

Cost of Living. Richards. (Wiley, \$1.)

Dietetics, Practical. Thompson. (Appleton, \$5-6.)

Food, Cost of. Richards. (Wiley, \$1.)

Food and Dietetics. Norton. (American School of Home Economics, \$1.25.)

Food and its Function. Knight. (Scribner, \$1.00.)

Food and Household Management. (Kinne and Cooley.)

Home Economics. Parloa. (Century, \$1.50.)

Nutrition and Diet. Couley. (American Book Co., \$.60.)

Handbook of Domestic Science and Household Arts. Richards. \$1.

The Westfield Book of Pure Foods. Board of Health, Westfield, Mass., \$.10.

The Chemistry of Food and Nutrition. Sherman. (Macmillan, \$1.50.)

Household Science and Arts. Morris. (American Book Co., \$.60.)

Milk and Its Products. Wing. (Macmillan, \$1.50.)

The Story of a Grain of Wheat. Edgar. (Appleton, \$1.)

## II. BOOKS USEFUL IN TEACHING SEWING AND TEXTILES.

Textiles. Woolman and McGowan. (Macmillan, \$1.80.)

How the World Is Clothed. Carpenter. (American Book Co., New York, \$.60.)

Household Textiles. Gibbs. (Whitcomb and Barrow, \$1.25.)

How the World Is Housed. (Carpenter, \$.60.)

Art and Economy in House Decorations. Take. (John Love Co., New York, \$1.35.)

Shelter and Clothing. Kinne and Cooley. (Macmillan Publishing Co., Chicago, Ill., \$1.10.)

The Story of Textiles. Perry Walton.

School Needlework. Hapgood. (Ginn, \$.50.)

Domestic Art in Woman's Education. Cooley.

Woman's Share in Primitive Culture. Mason. (Appleton, \$1.75.)

The Woman of Tomorrow. Hard. (Baker and Taylor, \$1.50.)

Girls and Education. Briggs. (Houghton & Mifflin, \$1.00.)

Vocation for the Trained Woman. Perkins. (Songmans, Green, \$1.20.)

The Woman Who Spends. Richardson. (Whitcomb and Barrow, \$1.00.)

The Art of Right Living. Richards. Whitcomb and Barrow, \$.50.)

The Efficient Life. Galick. (Doubleday and Page, \$1.20.)

Power Through Repose. Call. (Little-Brown, \$1.00.)

### III. HOUSEHOLD MANAGEMENT.

The House Bevier. (American School of Home Economics, Chicago, \$1.50.)

The Healthful Farmhouse. Dodd. (Whitcomb and Barrow, \$.60.)

The Sanitation of a Country House. Bashore. Wiley, \$1.)

The Cost of Cleanliness. Richards. (Wiley, \$1.)

The Farmstead. Allen (Ginn, \$1.25.)

Household Management. Terril. \$1.50.

Home Economics. Parloa. (The Century Co., \$1.)

The Cost of Living. Richards. (Wiley, \$1.)

How to Keep Household Accounts. Haskin. (Harper, \$1.)

Home Care of the Sick. Pope American School of Home Economics, \$1.50.

One Woman's Work for Farm Women. Buell. \$.55.

Laundry Manual. Balderston and Limerick. (Avil, Philadelphia, \$.50.)

Any book listed may be obtained from Whitcomb and Barrow, Huntington Chambers, Boston, Mass.

### IV. MAGAZINES.

Boston Cooking School Magazine, \$1.

Good Housekeeping, \$1.50.

National Food Magazine, \$1.50.

Delineator, \$1.50.

Ladies' Home Journal, \$1.50.

Journal of Home Economics, \$2.

These magazines may be ordered from Grumiaux News and Subscription Company, 175 Fifth Avenue, New York City.

### V. BULLETINS.

It will be necessary to write to the United States Department of Agriculture, Washington, D. C., for the following bulletins. These bulletins are sent free and furnish splendid material

for class use. It would be well for every school to obtain at least one complete set.

- Bulletin 28—American Food Materials.
- Bulletin 121—Peas, Beans.
- Bulletin 348—Bacteria in Milk.
- Bulletin 389—Bread Making.
- Bulletin 203—Canned Fruit.
- Bulletin 375—Care of Food in Home.
- Bulletin 282—Celery.
- Bulletin 249—Cereals as Breakfast Foods.
- Bulletin 36—Cotton Seed and Its Products.
- Bulletin 176—Cranberry Culture.
- Bulletin 131—Household Tests for Butter.
- Bulletin 252—Maple Sugar and Syrup.
- Bulletin 52—Sugar Beet.
- Bulletin 324—Sweet Potatoes.
- Bulletin 293—The Fireless Cooker.
- Bulletin 353—The Ice Box.
- Bulletin 293—The Model Kitchen.
- Bulletin 202—Digestibility of Starch of Different sorts as  
    Effected by Cooking.
- Bulletin 126—Eggs and Their Uses as Food.
- Bulletin 85—Fish as Food.
- Bulletin 249—Food, Care of in the Home.
- Bulletin . . . —Food Customs and Diet in American Homes.
- Bulletin . . . —Food, Functions and Uses.
- Bulletin 142—Food, Principles of Nutrition and Nutritive  
    Value of.
- Bulletin 298—Food Value of Corn and Corn Products.
- Bulletin 293—Fruit, Uses as Food.
- Bulletin 175—Home Manufacture and Use of Unfermented  
    Grape Juice.
- Bulletin 162—Influence of Cooking Upon the Nutritive Value  
    of Meats.
- Bulletin 34—Meat, Composition and Cooking.
- Bulletin 183—Meat on the Farm.
- Bulletin 413—Milk, Care of in the Home.
- Bulletin 363—Milk, Use of as Food.
- Bulletin 526—Mutton and Its Value in the Diet.

- Bulletin 332—Nuts and Their Use as Food.
- Bulletin 255—Preparation of Vegetables for the Table.
- Bulletin 295—Potatoes and Other Root Crops as Food.
- Bulletin 182—Poultry as Food.
- Bulletin 93—Sugar as Food.
- Bulletin 535—Sugar and Its Value as Food.
- Bulletin 234—Tea Cultivation and Manufacture in the U. S.
- Bulletin 516—The Production of Maple Syrup and Sugar.
- Bulletin 165—Silk Worm Culture.
- Bulletin 27—Flax for Seed and Fiber.
- Bulletin 274—Flax Culture.
- Bulletin 155—How Insects Affect Health in Rural Districts.
- Bulletin 166—Cheese Making on the Farm.
- Bulletin 241—Butter Making on the Farm.
- Bulletin 270—Modern Conveniences for the Farm House.
- Bulletin 345—Some Common Disinfectants.
- Bulletin 369—How to Destroy Rats.
- Bulletin 377—Harmfulness of Headache Mixtures
- Bulletin 426—Canning Peaches on the Farm.
- Bulletin 432—How a City Family Managed a Farm.
- Bulletin 444—Mosquitoes: Remedies and Preventives.
- Bulletin 449—Rabies or Hydrophobia.
- Bulletin 450—Some Facts About Malaria.
- Bulletin 459—House Flies.
- Bulletin 463—The Sanitary Privy.
- Bulletin 126—The Study on the Digestibility and Nutritive  
Value of Bread.
- Bulletin 359—Vegetables, Canning of.
- Bulletin 256—Vegetables, Preparation of for the Table.
- Bulletin 473—Tuberculosis.
- Bulletin 478—How to Prevent Typhoid Fever.
- Bulletin 487—Cheese and Its Economical Uses in the Diet.
- Bulletin 108—Trichinosis: A Danger in the Use of Raw  
Pork for Food.
- Bulletin 143—Milk and Its Products as Carriers of Tubercu-  
losis Infection.
- Bulletin 152—Directions for the Home Pasteurization of  
Milk.

Bulletin 153—The Dissemination of Disease by Dairy Products and Methods for Its Prevention.

Bulletin 166—The Digestibility of Cheese.

Bulletin 170—The Extra Cost of Producing Clean Milk.

Bulletin 25—Coloring Matters for Foodstuffs and Methods for Their Detection.

Bulletin 5—The Carpet Beetle, or "Buffalo Moth."

Bulletin 34—House Ants.

Bulletin 36—The True Clothes Moths.

Bulletin 46—Hydricyanic Acid Gas Against Household Insects.

Bulletin 47—The Bedbug.

Bulletin 51—Cockroaches.

Bulletin 71—House Flies.

Bulletin 77—Harvest Mites, or "Chiggers."

Bulletin 108—House Fleas.

The State Board of Health of Washington publishes a monthly bulletin, which will be sent free to anyone in the state upon request. It should have a wide circulation. Send for it. Write to the State Commissioner of Health, Cobb Building, Seattle, Washington.

March—Flies; Camp Sanitation; School Sanitation, etc.

May—Special Typhoid Bulletin.

June-July—Rules and Regulation of the State Board of Health.

August-September—Milk: Pasteurization; Care in Handling. Principle of Jelly Making. University of Illinois.

Lessons in Cooking for the Sick and Convalescent. Government Printing Office, Washington, D. C. Five cents.)

Bulletin 391—Meat, Economic Use in the Home. University of Illinois.

Bulletin 147—Meat, Market Classes and Grades of. University of Illinois.

Bulletin 158—Meat, Relative Economy, Composition and Nutritive Value of the Various Cuts of Beef. University of Illinois.

Bulletin 17—Twelve Lessons on Foods and Their Preparation. University of Nebraska.

Bulletins on Pure Food. E. F. Ladd. Edited by Emily May, North Dakota Experiment Station. Fargo, N. D.

1. Some Points in Choosing Textiles. Charlotte Gibbs, Department of Household Science, University of Illinois, Urbana, Ill.
2. Hints on Choosing Textiles. Bertha Titsworth, Cornell University, Ithaca, N. Y.
3. From Wool to Cloth. American Woolen Company, Boston, Mass.
4. A Short Description of Silk and Silk Manufacture. Cheney Bros., South Manchester, Conn.
5. The Silk Worm and Its Silk. Belding Bros. & Co., Monroe and 5th Avenue, Chicago, Ill.
6. Silk, The Real Versus the Imitation. Brainerd & Armstrong Company, New London, Conn.
7. Silk Culture. Bulletin 181. North Carolina Agricultural Experiment Station, Raleigh, N. C.
8. The Story of Cotton. Hampton Institute Press, Hampton, Virginia.

### List of Educational Exhibits.

(Firms that furnish free, on application, exhibits for use in schools having proper facilities for taking care of them.)

#### TEXTILES, DYESTUFFS, CLOTHING, ETC.

Buttons. J. F. Boepple Button Co., Davenport, Iowa.

Cotton. U. S. Dept. of Agriculture, Dept. of Plant Industry. Specimens of cotton bolls, seed, oil, and cakes.

Cotton. Williamantic Thread Co., Williamantic, Conn. Case containing many specimens.

Cotton. American Cotton Co., 25 Broad Street, New York. Exhibit in boxes showing stages in preparation.

Cotton. Clark's O. N. T. Spool Cotton. Geo. A. Clark & Bros., 400 Broadway, New York.

Dyestuffs. Cassela Color Co., 182 Front Street, New York.

Hemp and Jute. Edwin Fiter Co., Philadelphia. Cordage Works.

Linen. U. S. Dept. of Agriculture, Bureau of Plant Industry. Flax stalk and fiber, also combed ramie, hemp, jute.

Linen. Bathour Linen Thread Co., 96 Franklin Street, New York.

Plant Fibers of the United States. Bureau of Plant Industry, Washington, D. C.

Ramie. Schlitten Ramie Co., 413 Browne Street, New York. Box containing specimens of stalk and fiber.

Ramie in Process of Manufacture. Ringheim-Schlichten Ramie Co., 473 Borome Street, New York.

Shoes in Various Stages of Manufacture. W. L. Douglas Shoe Co., Brockton, Mass.

Silk Cloths in Process of Manufacture. Cheney Silk Mills, South Manchester, Conn.

Silk Culture. Corticelli Mills, St. Louis, Mo.

Twine. Dolphine Jute Mills, Paterson, N. J.

#### FOODS.

Baking Powder. Dr. Price Manufacturing Co., Chicago; Royal Baking Powder Co., New York.

Breakfast Foods. Postum Cereal Co., Battle Creek, Mich.

Cereals. Hicker-Jones Jewel Milling Co., Water and Corlears Streets, New York.

Chocolate and Cocoa. Hershey Chocolate Co., Hershey, Pa.; Walter Baker & Co., Dorchester, Mass.; Huyler's, New York; Walter M. Lowney Co., Boston.

Cocoanut, Products of. C. F. Simonin's Sons Co., Trenton and Clearfield Streets, Philadelphia.

Cocoanuts, Two Full-Husked. L. Schepp & Co., New York.

Coffee Branch in Colors on Cloth. E. J. Gillies & Co., 24 Washington Street, New York.

Coffee and Tea. "From Tree to Lip." C. F. Blanke Tea & Coffee Co., St. Louis, Mo.

Corn Products. Glucose Sugar Refining Co., Chicago; Corn Products Co., Chicago.

Flour in Process of Manufacturing. Washburn-Crosby Co., Minneapolis; Pillsbury-Washburn Co., Minneapolis.

Malted Milk. Horlick's Malted Milk Co., Racine, Wis.

Manufactured Products. American Cereal Co., Chicago.

Rice. American Rice Co., Kansas City, Mo.

Salt. The Diamond Crystal Salt Co., St. Clair, Mich.

Spices. Wm. Schotten & Co., St. Louis, Mo.

Sugar in the Process of Refining. American Sugar Co., New York.

Tea and Coffee. Chase & Sandborn, Boston and Chicago.

An Educational Miniature House. Johnson & Keichline, Bellefonte, Penn.

#### FUELS AND ILLUMINANTS.

Petroleum and By-Products. Standard Oil Co., 26 Broadway, New York City.

Soap. Proctor & Gamble, Ivorydale, Ohio.

Charts showing the composition of food materials. Prepared by C. F. Langworthy, U. S. Dept. of Agriculture, may be obtained for a nominal price.



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